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SUB-COMMITTEE OF EXPERTS ON THE
TRANSPORT OF DANGEROUS GOODS

REPORT OF THE SUB-COMMITTEE OF EXPERTS ON ITS THIRD SESSION

(2 - 13 July 1990)

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REPORT

ATTENDANCE

1. The Sub-Committee of Experts on the Transport of Dangerous Goods held its third session from 2 to 13 July 1990. The session was attended by experts from the following countries: Canada; China; France; Germany, Federal Republic of; India; Italy; Japan; Netherlands; Norway; Poland; Spain; Sweden; Union of Soviet Socialist Republics; United Kingdom; United States of America. Observers from Austria, Belgium and Switzerland participated in accordance with Rule 72 of the Rules of Procedure of the Economic and Social Council. Representatives of the United Nations Environment Programme (UNEP) were also present. Representatives of the following specialized agencies and intergovernmental organizations attended the session: International Labour Organisation (ILO); International Civil Aviation Organization (ICAO); European Economic Community (EEC); Central Office for International Railway Transport (OCTI). Representatives of the International Road Transport Union (IRU), the European Council of Chemical Manufacturer's Federations (CEFIC), the European Fertilizer Manufacturers' Association (EFMA), the International Chamber of Shipping (ICS), the European Secretariat of Manufacturers of Light Metal Packaging (SEFEL), the Hazardous Materials Advisory Council (HMAC) and the Permanent International Committee on Industrial Gases and Calcium-Carbide (CPI) took part in the discussions when items of concern to their Organizations were considered.

2. The session was opened by a member of the secretariat. The Sub-Committee expressed its regret that the International Maritime Organization (IMO) was not represented during this final session of the biennium 1989/1990.

ADOPTION OF THE AGENDA

3. The Sub-Committee of Experts adopted the provisional agenda proposed by the secretariat (ST/SG/AC.10/C.3/5) subject to a correction in the French version.

ELECTION OF OFFICERS

4. Mr. L. Grainger (United Kingdom) was elected Chairman and Mr. J. Monteith (Canada) and Mr. M. Mariat (France) were elected Vice-Chairmen.

ADMINISTRATIVE MATTERS

5. On 11 June 1990, the deadline for submission of formal documents, the secretariat had distributed an informal "List of documents under each item of the agenda". The Sub-Committee agreed to regard this as the annotated agenda for its third session. It also agreed to the "Provisional time-table for the session" prepared by the secretariat.

6. Since 11 June, 17 papers had been submitted to the secretariat for informal distribution. These were listed and assigned unofficial reference numbers as shown in annex 1 to this report.

7. Three working groups were set up. The first, on Listing and Classification was led by Mr. J. Monteith (Canada); the second working group, on agenda items 3 and 4, by Mr. T. Groothuizen (Netherlands); the third, on Class 1, by Mr. M. Steidinger (Federal Republic of Germany).

8. The secretariat pointed out that 19 documents submitted in the period February to April 1990 had not been published in French in sufficient time for French-speaking delegations to consider them and determine their position on the proposals prior to the session.

REVIEW OF DIVISION 4.1

Documentation: ST/SG/AC.10/C.3/R.46/Rev.1; -/C.3/R.47/Rev.1; -/C.3/R.80; -/C.3/R.108; -/C.3/R.113; -/C.3/R.114; -/C.3/R.122; -/C.3/R.125; -/C.3/R.129; -/C.3/R.134; -/C.3/R.135; -/C.3/R.138; -/C.3/R.141; -/C.3/R.145; -/C.3/R.146; -/C.3/R.148; -/C.3/R.152

9. The Chairman recalled that the series of votes during the second session had resulted in a somewhat inconclusive situation (see para. 20 of the report ST/SG/AC.10/C.3/4). It was important that early in the third session the Sub-Committee should reach a decisive conclusion on the issues so that the working group on Division 4.1 had unequivocal terms of reference. In view of the numerous new documents on the subject he proposed to commence discussion with documents -/C.3/R.80, -/C.3/R.122, -/C.3/R.135, -/C.3/R.125, -/C.3/R.108, -/C.3/R.134 and -/C.3/R.148 in that order. There was no objection to that procedure. The seven documents were introduced by their authors who referred to associated informal papers where appropriate (see annex 1 to this report).

10. The Sub-Committee did not accept the proposal in document -/C.3/R.125 which would have involved reverting to the discussion during the second session and embarking on a totally different course in order to assign self-reactive substances to an expanded Division 5.2 at some unspecified time in the future. The Sub-Committee agreed to pursue the analogy between the principles of the scheme of classification of organic peroxides in Division 5.2 and the revised scheme for self-reactive substances in Division 4.1.

11. There was a lengthy discussion on the use of the self-accelerating decomposition temperature (SADT) test as a screening technique for self-reactive substances. Whereas organic peroxides were defined by their chemical structure, there was a requirement for a screening criterion to determine those self-reactive substances which should be subjected to the classification procedure proposed for Division 4.1 on the basis of an SADT-value. By a substantial majority the Sub-Committee rejected an upper SADT limit of 100° C for this purpose (see document -/C.3/R.108, para. 5). After further discussion the opinions converged on a limiting temperature of 55° C so that only temperature-controlled self-reactive substances were subjected to the new generic entry system while for the other self-reactive substances the existing entries would remain for the time being.

12. The Sub-Committee decided by a decisive vote that a lower limiting value of 300 J/g for the heat of decomposition of self-reactive substances would be introduced for inclusion into Division 4.1.

13. Continuing the discussion of issues to be settled before the working group on Division 4.1 could start its task, the Sub-Committee next considered the matters referred to it by the working group during the second session (see document -/C.3/R.80, para. 20).

READEX FICHE

14. The expert from the Netherlands had set out in document -/C.3/R.134, paragraph 4, the options for naming Division 4.1. A majority preferred the second option "Flammable solids, self-reactive substances and desensitized explosives" though some experts and observers questioned the need to change the existing name "Flammable solids". As regards paragraph 3 of document -/C.3/R.134 a consensus was developed to retain the name "Desensitized explosives and related substances" for the third family of substances designated "group (c)" earlier in that document. The Chairman invited the working group to retain that name but acknowledged that the Sub-Committee might wish to review that decision later during the session.

15. In document -/C.3/R.108 the expert from the United Kingdom had proposed a label which was orange in the upper half for "Desensitized explosives and related substances" in Division 4.1. No other new labels were proposed for self-reactive substances. That expert did not press for a decision on the new label during the third session.

16. The expert from the United States supported by the observer from OCTI questioned the status of non-temperature-controlled self-reactive substances under the scheme being developed by the Working Group. After further discussion the comment from the United States was withdrawn.

17. The Chairman summed up the discussion under this item of the agenda and the Chairman of the working group proposed that his group should consider the following matters:

(a) To revise the proposed definition and principles for the classification of temperature-controlled self-reactive substances;

(b) To assign temperature-controlled self-reactive substances to appropriate generic entries;

(c) To develop a scheme to identify in chapter 14 of the Recommendations the currently listed non-temperature-controlled self-reactive substances for the moment;

(d) To determine how to describe water-wetted explosives in chapter 14 while maintaining the status quo for the moment;

(e) To list the consequential amendments in chapter 2, etc.;

(f) To consider papers under item 3 of the agenda which dealt with Listing and Classification.

The Sub-Committee agreed to that proposal.

18. The Chairman of the working group on Division 4.1 and self-reactive substances (SRS) later reported on the results of its deliberations on the subject. His written report comprised a narrative section together with an annex giving a draft revised text for chapter 14 of the Recommendations (26 pages) and a second annex indicating a number of consequential amendments for other chapters of the Recommendations (5 pages). Thanks to the availability of new PC computer equipment in the Transport Division and the dedication of certain members of the delegation of the United Kingdom, copies

of the working group's 37-page report created during the session had been printed and distributed to every participant in the plenary session of the Sub-Committee for study prior to adoption.

19. The Sub-Committee expressed its appreciation for the work accomplished by the Chairman and members of his working group. It was agreed that the whole report, as amended by the Sub-Committee, should be submitted for translation and endorsement by the Committee of Experts during its sixteenth session in December 1990 (document reference ST/SG/AC.10/R.268). This would provide inter alia an essential reference document to explain the technical basis of this major revision of the provisions for substances in Class 4.

20. The Sub-Committee considered the actions listed in paragraph 29 of the report of the working group. First, concerning annex 1 it decided by a series of votes to retain the text of paragraph 14.2.1.4; to introduce a limit of 75° C SADT in paragraph 14.2.2.1.1; to leave all the entries in table 14.2 in square brackets pending submissions by the Federal Republic of Germany and CEFIC to the Committee giving information on the carriage of such substances internationally; to retain the text of paragraphs 14.2.2.5.4 and 14.2.2.12 as drafted by the working group; to include non-temperature-controlled SRS in the generic entry system. The expert from the United States indicated his intention to submit new proposals to the Committee.

21. Concerning annex 2, the Sub-Committee agreed to the deletion of "SR21" and adopted the other new entries proposed for chapter 2. It decided by a series of votes to retain the text of paragraphs 13.6.1.5 and 13.6.1.6 and decided to delete the text of paragraph 13.6.1.7.

22. The Sub-Committee then adopted annexes 1 and 2 of the report of the working group, as amended.

23. Reverting to paragraph 26 of the report, the Sub-Committee considered the proposal in document -/C.3/R.113 as amended by an informal paper developed by the experts from the United Kingdom and Canada during the session. It decided by a substantial majority to amend chapter 15 of the Recommendations, to deal with organic peroxide resin kits, as shown in annex 3 to this report.

24. The Sub-Committee also considered the proposal in document -/C.3/R.114 as amended by another informal paper developed by the expert from the United Kingdom during the session. It adopted the amended proposal for a new entry in chapter 2 for 2-bromo-2-nitro-propane-1, 3-diol, as shown in annex 3 to this report.

MANUAL OF TESTS AND CRITERIA: TEST FOR SELF-REACTIVE SUBSTANCES

Documentation: ST/SG/AC.10/C.3/R.9/Rev.1; -/C.3/R.80; -/C.3/R.112; -/C.3/R.126; -/C.3/R.148

25. The secretariat informed the Sub-Committee that the second addition of the Manual of Tests and Criteria (ST/SG/AC.10/11/Rev.1) was available and distributed it to the participants in English and in French.

26. The Chairman recalled that the decision to undertake the task of further revising the Manual of Tests and Criteria, in order to rationalize and simplify the presentation of tests and flow charts, was recorded in earlier reports (documents ST/SG/AC.10/C.3/2, paras. 72 and 76 (c) and -/C.3/4, para. 23).

27. The expert from the United Kingdom introduced document -/C.3/R.9/Rev.1 which followed on from the report of the working group during the second session (document -/C.3/R.80, para. 19). After the introduction, a number of experts welcomed the proposal in principle. The expert from France suggested that publication of this further revision should await feed-back from industry on the first revision of the Manual.

28. The Chairman said he envisaged publication after December 1992. The second revision might include new proposals for tests by the expert from the Union of Soviet Socialist Republics. He regarded the framework set out in document -/C.3/R.9/Rev.1 as a good base document for the working group.

29. The proposals in paragraphs 2 (b) and 2 (c) in document -/C.3/R.126 concerning tests were referred to the working group for study. The test in paragraph 2 (a) concerning Class 1 was postponed until later in the session when explosives specialists were present.

30. The observer from OCTI reminded the Sub-Committee that the Manual now had legal status because it was invoked in RID/ADR. The expert from the United States emphasized that the revision of the Manual must be purely editorial. Substantive changes to the classification procedures should not be attempted. It was also pointed out that Amendment 25 of the IMDG Code and the forthcoming revision of ICAO Technical Instructions would also require a relatively permanent text in the Manual to which they referred.

31. The report of the working group on Division 4.1 and self-reactive substances also dealt with the future work on the Manual of Tests and Criteria (paras. 16 to 24 above). The Sub-Committee welcomed the offer by the expert from the United Kingdom recorded in paragraph 27 but emphasized that his revision should be purely editorial. There should be no technical revision of the agreed tests until industry had gained experience with them. The Sub-Committee rejected by a substantial majority the proposal, in paragraph 29 (d) of the report, to develop a test scheme for non-temperature-controlled self-reactive substances and related substances because it would not be a cost-effective use of limited resources.

32. The Sub-Committee then adopted the report of the working group subject to the above amendments and requested the secretariat to publish the amended version in the name of the Netherlands for endorsement by the Committee (document ST/SG/AC.10/R.268).

LIAISON WITH THE EEC, ILO AND UNEP

Documentation: ST/SG/AC.10/C.3/R.82

(a) Liaison with the European Economic Community (EEC)

33. The representative of the Commission of the European Economic Community made a statement to explain the historical reasons for the recent initiatives

by his Commission in the field of transport of dangerous goods. In response to resolutions by the European Parliament a programme had been instituted involving five principal actions: the training of agents involved in the carriage of dangerous goods; the training of drivers of road vehicles; the ratification by member States of all relevant international conventions; improved control over the transport of dangerous goods by road; the obligations concerning vessels carrying dangerous goods in packages entering EEC ports. It was noted that Ireland was expected to ratify the ADR by the end of 1990.

34. Referring to the discussions on genetically modified micro-organisms (recorded later in this report) he expressed regret that the Sub-Committee had been unable to take firm decisions which would help the EEC in its action programme. He appreciated that this was partly due to the insufficient resources available to the Sub-Committee to carry out its work. He hoped for more concrete results from future co-operation between the Sub-Committee and the EEC since harmonization was a common objective. Unfortunately in the absence of useful results from the current session his Commission might consider it had discharged its obligation to consult the United Nations and might have to take unilateral action which would result in a plurality of international instruments in this field.

35. The Chairman recalled that the Committee of Experts had worked for more than 30 years to develop multimodal recommendations for world-wide application without regard to politics and its work was now well-established. For regional political groupings to introduce variations would help neither transport safety nor commerce. Great care would be needed with any such innovations. Diversion of resources from the Committee's work would be regrettable.

36. Many experts and observers supported the Chairman's comments and expressed regret at the possibility of unilateral action by a regional group which was contrary to the universal desire for harmonization amongst the modes of transport throughout the world. Part of the difficulty with the current request from the EEC was that the subject was at the frontier of biotechnology and there were no easy answers.

37. The remark about resources and the way the Sub-Committee carried out its work prompted statements from the expert from the United States (the former Chairman of the Committee) and from the Chairman of the Sub-Committee. Those statements recalled the chronic shortage of human resources available to service the ECOSOC work and the numerous resolutions on the matter over the past decade. The Secretary stated that in March 1990 the Executive Secretary of the ECE had taken up with United Nations Headquarters in New York the matter of one Professional and one General Service staff called for in ECOSOC resolution 1989/104 and previous resolutions. Meanwhile the dangerous goods unit had the benefit of part-time assistance by a computer systems analyst.

38. The Chairman invited experts to consult their Permanent Missions to the United Nations in Geneva with a view to finding a lasting solution to the chronic problem of lack of support for the ECOSOC work.

(b) Liaison with the International Labour Organisation (ILO)

39. The Chairman welcomed an observer from the ILO who was participating in the session of the Sub-Committee to maintain the liaison established in 1989. The Sub-Committee considered an informal paper by the Secretary (see annex 1 to this report) which reported on his participation in the ILO Conference 1990 in order to present the Sub-Committee's views on the proposed Convention on Safety in the Use of Chemicals at Work. The Sub-Committee acknowledged the excellent co-operation which had been established between the secretariats of the ILO and the Sub-Committee and expressed its satisfaction at the results. Articles 6 and 7 of the Convention adopted on 23 June 1990 invoked the UN Recommendations on the Transport of Dangerous Goods.

40. The observer from ILO was asked if the Sub-Committee would be able to participate in future technical work concerning the implementation of the Convention. The Sub-Committee was assured that harmonization of classification systems, including that in the UN Recommendations, was a prime objective and that there would be ample opportunity for liaison under the aegis of the International Programme on Chemical Safety (IPCS), which is a joint programme of ILO, UNEP and the World Health Organization (WHO).

41. The observer from HMAC asked if the Convention addressed the subject of training transport workers handling dangerous goods. He was informed that the Convention covered training in a general way but did not specifically address the subject of carriers of dangerous goods. The secretary was requested to inform the ILO on the outcome of any discussion on a proposal by HMAC concerning worker training (see annex 1) and to publish his report for the next session of the Committee (document ST/SG/AC.10/R.271).

(c) Liaison with the United Nations Environment Programme (UNEP)

42. The Chairman welcomed three observers from the United Nations Environment Programme who had again come to the Sub-Committee's session to maintain the liaison created during the development of the Basel Convention. The observers informed the Sub-Committee of progress on the implementation of the Convention. The European Economic Community and 53 States had signed the Convention and 4 States had ratified it. Concurrently with the session of the Sub-Committee, a meeting of legal and technical experts had taken place in Geneva to develop elements which might be included in a protocol on liability and compensation for damage caused during transboundary movements of hazardous wastes. The Interim Secretariat of the Basel Convention was ensuring close co-operation with other relevant United Nations organizations (IMO, IAEA, GATT, WHO, ILO).

43. The expert from the Netherlands asked if the UNEP experts had taken account of the Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD) developed by the Economic Commission for Europe. He was assured that the CRTD document had been used as a background document for the experts. However, the Basel Convention had more specific requirements than those of the CRTD Convention.

44. The expert from Canada asked what impact the proposed UNEP protocol on liability would have on the future work of the Sub-Committee. The observer from UNEP replied that it was premature to give a detailed assessment but pointed out that article 4 of the Basel Convention called for compliance with existing international instruments. In the coming months every effort would

be made to link existing classification systems to the detailed systems being developed for the identification of hazardous wastes. One possibility was to reconsider an idea in the Organization for Economic Co-operation and Development (OECD) called the International Waste Identification Code (IWIC).

45. The Sub-Committee then considered document -/C.3/R.82 in which the expert from the United Kingdom proposed an amendment to the UN Recommendations to fulfil an obligation to align Class 9 with the UNEP system of classification. The proposal was not accepted. Instead, the Sub-Committee adopted by a decisive vote a proposal from the expert of the United States for two new sentences to follow paragraph 1.9 of the Recommendations as shown in annex 3 to this report. The experts were invited to give careful consideration to this text before the next session of the Committee to ensure that any consequential amendments were identified.

REVIEW OF CLASS 2 (GASES)

Documentation: ST/SG/AC.10/C.2/R.604; -/C.2/R.671; -/C.2/R.672; ST/SG/AC.10/C.3/R.5; -/C.3/R.32; -/C.3/R.58; -/C.3/R.58/Corr.1; -/C.3/R.72/Rev.1 and Rev.2; -/C.3/R.96; -/C.3/R.102; -/C.3/R.121; -/C.3/R.143

46. The expert from the United Kingdom introduced document -/C.3/R.96 which concerned an amendment to paragraph 1.23 of the Recommendations. A vote was taken following a brief discussion. The document was adopted by 9 votes to 2, as shown in annex 3 to this report.

47. The expert from the United States introduced document -/C.3/R.121, containing a number of proposals which were discussed one by one as follows:

(a) Editorial amendments to paragraph 1.16 of the Recommendations:

Following a discussion, a vote was taken on this amendment which was rejected by 7 votes to 3.

(b) Amendments to the text of paragraph 1.17 of the Recommendations:

The new definition of "Division 2.1 - Flammable gases" (subpara. 1.17.1) was adopted with some changes (see annex 3 to this report).

Division 2.1, paragraph 1.17.1 (b) was amended as shown in annex 3 to this report.

Following a discussion of the definition of "asphyxiant gases", a further proposal to amend subparagraph 1.17.1 was rejected.

(c) Corrosive subsidiary risk labelling:

The discussion on this subject also concerned an informal paper from CPI (see annex 1 to this report) on the definition of "Poisonous (toxic) and corrosive gases", Division 2.3 of paragraph 1.17 of the Recommendations. CPI later submitted a revised proposal for the definition on the basis of the Sub-Committee's discussions but this was not accepted. The proposal in the CPI paper and that contained in document -/C.3/R.121 concerning the last note to subparagraphs 1.17.1 and 1.17.2 (c) were rejected.

48. The expert from the USSR submitted an informal paper (see annex 1 to this report) on the definition of gases, paragraph 1.14 and the definition of flammable gases, paragraph 1.17. In view of the discussions which had already taken place, the two matters were not considered except in so far as the Russian version was concerned. The proposal to amend table 13.2 was considered during the discussion of document -/C.3/R.102, submitted by the expert from Canada (see para. 51 below).

49. The observers from HMAC and CPI introduced a new proposal for the definition of poisonous (toxic) gases (see annex 1 to this report). Following a lengthy debate on corrosiveness and tests for corrosiveness, an amended text for subparagraph 1.17.1, Division 2.3, was adopted (see annex 3 to this report). During the discussion, the observer from CPI mentioned that the ISO/DIS/10156 standards were to be published by the end of 1990. The expert from France confirmed that.

50. The discussion of the new presentation of subparagraph 1.17.2 (c) of the Recommendations (see ST/SG/AC.10/4, annex 1) continued with attention being focused in particular on the words "chez l'homme" on page 30 of the French version. The Sub-Committee felt that those words did not mean exactly the same in French as did the corresponding words in the English and Russian versions. The secretariat was asked to request the French translator to seek a translation more in line with the Russian and English texts.

51. The expert from Canada introduced document -/C.3/R.102, which contained a proposed amendment to table 13.2 of the Recommendations. Paragraph 3 of the informal document submitted by the expert from the USSR was added to the table, which was adopted with some amendments (see annex 3 to this report).

52. The informal paper submitted by the observer from CPI concerning Class 2, and more especially new paragraph 13.4.9, of the Recommendations was discussed; the Sub-Committee invited the observer from CPI to submit a new proposal for the next session after consultation with the participants.

53. In that connection, the secretariat asked participants to submit their documents by Monday, 24 September 1990 in order to ensure that they were translated and distributed in time for the December 1990 session of the Committee.

54. The expert from the Federal Republic of Germany introduced document ST/SG/AC.10/C.2/R.604, containing the results of further tests for flammability based on the ISO standards used in Europe. The experts from the Federal Republic of Germany and France were asked to provide the Committee with more ample information on those standards.

55. The expert from the Netherlands introduced documents ST/SG/AC.10/C.2/R.671, -/C.2/R.672 and ST/SG/AC.10/C.3/R.72/Rev.2. It was decided to refer document -/C.2/R.671 to the Committee. According to the observer from OCTI, documents -/C.2/R.672 and -/C.3/R.72/Rev.2 were very important in view of the current problem of the carriage of mixtures of gases in tanks within Europe. The Sub-Committee noted the idea in document -/C.2/R.672 of a system which would establish both the basic formulae and the degree of filling of tanks. The experts from the Netherlands and the Federal Republic of Germany were asked to work on the question and submit their results to the Committee for its future work.

56. There was general support in principle for the introduction of a generic entry system for mixtures of gases as proposed in the joint document submitted by the experts from the Union of Soviet Socialist Republics and the Netherlands (-/C.3/R.72/Rev.2). Several countries expressed their wish to retain the existing entries. The expert from France indicated that, as far as he was concerned, there should eventually be only generic entries. It was left for the Committee to decide whether there should be a new chapter concerning special recommendations for Class 2.

57. The Chairman then introduced the other documents to be discussed in connection with Class 2. Based on a proposal by the expert from the United States, the last sentence of paragraph 13.6 (b) was deleted. The proposal as adopted is shown in annex 3 to the report. The experts from Canada and the United States withdrew documents -/C.3/R.5 and -/C.3/R.58 and said they would submit a joint revised proposal to the Committee.

58. The expert from the United States introduced document -/C.3/R.143 on the need to change the temperature for aerosol tests back to 55° C in paragraph 9.8.1. of the Recommendations. Several participants disagreed. The Chairman considered that a change in that paragraph alone would not solve the problem; he asked that further information should be obtained on the matter and that document -/C.3/R.143 should be re-submitted to the Committee together with document ST/SG/AC.10/R.245.

USE OF PROPER SHIPPING NAMES AND UNITED NATIONS NUMBERS FOR "NOT OTHERWISE SPECIFIED" ENTRIES IN CHAPTER 2

Documentation: ST/SG/AC.10/C.3/2, annex 3, section 2; ST/SG/AC.10/C.3/R.34; -/C.3/R.81; -/C.3/R.116; -/C.3/R.147; -/C.3/R.149

59. The Vice-Chairman led the discussion on this item. The observer from OCTI gave a detailed presentation of document -/C.3/R.116 (Divisions 4.1, 4.2, 4.3 and 5.1: Proposal for new n.o.s. entries). The expert from the Netherlands pointed out that the proposals had to be seen as an interim measure directed to a generic entry system. The observer from OCTI had previously said that it was impossible for his organization to make any new structural amendments to the classification of substances from the standpoint of RID/ADR. Counter arguments to those in document -/C.3//R.149 submitted by the United States of America were set out in an informal paper from OCTI (see annex 1 to this report). The expert from the United States presented document -/C.3/R.149 which argued that the entries proposed in document -/C.3/R.116 provided no useful additional information from the standpoint of the transport of dangerous goods. Most of the participants were in favour of the proposals in -/C.3/R.116. The expert from France once again suggested that the definitions should be established on the basis of the n.o.s. entries so as to reduce eventually the United Nations numbers. The expert from the United States then made a formal statement recorded in annex 2 to this report. The expert from Canada wished to be associated with that statement. The observer from OCTI replied as recorded in annex 2. The expert from the United States then made a separate statement concerning the late publication of documents, in particular document -/C.3/R.116, as shown at the end of annex 2 to this report.

60. The discussion began with the questions raised by the United States on the distinction between organic and inorganic substances. The expert from the Federal Republic of Germany drew attention to existing examples in the Recommendations. It was decided that this matter should be dealt with on a case-by-case basis.

61. The Vice-Chairman proposed that discussion should begin on Division 5.1. A problem arose with regard to solutions and the text of paragraph 1.40 of the Recommendations. The expert from the United States proposed that paragraph 1.40 (c) should be amended but this proposal was not adopted.

62. The Sub-Committee decided to give a United Nations number to each "RID/ADR" substance presented as "XXXX" in document -/C.3/R.116, while bearing in mind the wish to reduce the United Nations numbers. The expert from the United States raised the question of whether solutions were to have a new United Nations number. The experts from the Netherlands and Italy and the observer from Belgium replied that the United Nations number used in their information systems enabled them to take action in an emergency. Other participants, including those from Canada and the United Kingdom, submitted further proposals (the addition of the words "concentrated" and "and") which were rejected. Particular attention was given to the need to be able to identify readily the substances carried in order to be able to act rapidly in an emergency.

Division 4.1

63. Division 4.1 was adopted with amendments and new United Nations numbers as shown in annex 3 to this report.

Division 4.2

64. Regarding the entry of Division 4.2, section 2, 3°(c), the expert from the United States objected that since United Nations No. 1373 already existed, there was no reason to insert another entry. The Sub-Committee adopted the amendment to entry No. 1373 (see annex 3 to this report).

65. A long discussion of a number of terms followed:

on the term "slightly" ("légèrement" in French) which it was decided to delete from the definitions;

on the term "self-heating" for substance UN No. 2006; the Sub-Committee decided to keep it despite the opposition of the experts from the United States, the Union of Soviet Socialist Republics and Canada;

on the distinction between organic and inorganic substances which the Sub-Committee decided to retain. The experts from the United States, Canada, Japan and the Netherlands dissociated themselves from that decision.

66. The results of the discussion concerned the adoption of new substances in the Recommendations and amendments to other substances, as shown in annex 3 to this report.

Division 4.3

67. The expert from the United States asked for explanations concerning organometallic compounds. The observer from OCTI replied that they were essentially liquid substances with a solid deposit. The three new entries were adopted, as shown in annex 3 to this report. The Vice-Chairman invited the observer from OCTI to inform the Committee of subsidiary risk 3 which should be inserted in the appropriate entries for the next session of the Committee (December 1990).

Division 5.1

68. The Sub-Committee agreed to give a new United Nations number to the entries in Division 5.1, as shown in annex 3 to this report.

69. The Sub-Committee then considered documents -/C.3/R.34 submitted by the expert from China and -/C.3/R.81 submitted by the expert from the Netherlands, concerning a new method of coding for dangerous goods. Many participants recognized that the existing code did not identify the substance carried. They therefore understood that it was necessary to consider the suggestion to revise the Recommendations and accepted it in principle. The experts from Italy, the Union of Soviet Socialist Republics and the Federal Republic of Germany supported the ideas brought forward in document -/C.3/R.81 and suggestions were made. The expert from the Federal Republic of Germany invited the expert from the Netherlands to prepare for the next session of the Committee a proposal for a text to be inserted in chapter 1.

REVISION OF PARAGRAPH 1.10

Documentation: ST/SG/AC.10/C.3/2, annex 3, section 1; ST/SG/AC.10/C.3/R.115; -/C.3/R.142

70. The Sub-Committee discussed documents -/C.3/R.115 submitted by the expert from the United Kingdom and -/C.3/R.142 submitted by the expert from the United States. Both documents proposed amending the report -/C.3/2, annex 3, (amendment to para. 1.10 of the Recommendations).

71. There was a lengthy discussion of the reference temperature mentioned in the two documents: 20° C in that from the United States and 45° C in the report of the first session (-/C.3/2).

72. The expert from the Federal Republic of Germany informed the Sub-Committee that standard ISO/2137/1972 had been reformulated as ISO/2137/1985. The Sub-Committee agreed on 20° C and the first part of paragraph 1.10 (annex 3 to document ST/SG/AC.10/C.3/2) was amended, as is shown in annex 3 to this report. With regard to methods of determining viscosity, it was decided simply to give a reference instead of including these methods in the Recommendations (see annex 3 to this report).

73. With regard to packing, the discussion concerned the new paragraph to be added to chapter 9.1 of the Recommendations and the temperature of the melting-point of the substances: 45° C or 55° C. Other proposals, such as those submitted by the experts from Italy and the USSR, called for different specifications.

74. The Sub-Committee decided to follow the ICAO wording, amended as it appears in annex 3 to this report.

MATTERS CONCERNING CLASS 1

Documentation: ST/SG/AC.10/C.3/R.35; -/C.3/R.36; -/C.3/R.37; -/C.3/R.38; -/C.3/R.76; -/C.3/R.77; -/C.3/R.78; -/C.3/R.79; -/C.3/R.90; -/C.3/R.106; -/C.3/R.107; -/C.3/R.144

75. The Sub-Committee discussed document -/C.3/R.76 concerning a change in table 10.1 of the Recommendations which involved changes in the list of substances and the addition of a particular packing requirement to UN Nos. 0106 and 0107. The proposals were adopted (see annex 3 to this report).

76. Document -/C.3/R.107: Addition of packaging of solid plastics boxes 4H2 to packing methods E102, E106, E112 and E119. It was proposed that particular packing requirement 54, in amended form, should be added to packing method E119. The proposal was adopted (see annex 3 to this report).

77. The proposal in document -/C.3/R.78 on "Cartridges for weapons, inert projectile" was adopted (see annex 3 to this report).

78. Document -/C.3/R.79 on the classification of basebleeds: on the proposal of the experts from the United Kingdom, the Netherlands, the Federal Republic of Germany and France, a new version was developed during the session. The new version, introduced in an informal paper by the expert from the United Kingdom, was adopted as shown in annex 3 to this report.

79. Document -/C.3/R.90: Compatibility group for primers, cap type and the description of primary explosives. In view of the difficulties surrounding the question of mixed loading in vehicles, the Sub-Committee requested the expert from the Federal Republic of Germany to submit a new version for the next session.

80. Document -/C.3/R.106: New entries for signals, railway track, explosive. The Sub-Committee adopted the proposal, with a further amendment to table 4.3 of the Recommendations (see annex 3 to this report) and noted that it might be desirable to gradually group explosive articles under common names.

81. Document -/C.3/R.77: Testing for compatibility group S. The document as amended in the light of participants' comments was adopted in principle (see annex 3 to this report) and inserted in paragraph 4.4.1 of the Recommendations.

82. Document -/C.3/R.144: Tests for Division 1.6 explosives. The document and informal paper from France were considered by the Sub-Committee and they were adopted for the Manual of Tests ST/SG/AC.10/11/Rev.1 (see annex 4 to this report).

83. The expert from the USSR introduced his documents (-/C.3/R.35, -/C.3/R.36, -/C.3/R.37, -/C.3/R.38) and the informal paper on the rationalization of the Recommendations: Tests and Criteria (ST/SG/AC.10/11/Rev.1). He explained the reasons for the decision by the Union of Soviet Socialist Republics to submit the proposals. He proposed that they should be considered altogether since

they dealt with the same series of tests. However, some participants raised objections to that procedure and it was decided to consider the tests one by one.

84. In view of the initial objections, the expert from the USSR proposed that a working group should be set up; unfortunately, that raised a language problem. However, once that problem had been solved, through the good offices of the delegation of the Federal Republic of Germany, it was possible to set up the working group. The expert from the USSR briefly introduced the various documents to enable the experts of the working group to begin their discussions.

85. The Sub-Committee then considered documents -/C.3/R.9/Rev.1 (Rationalization of the Recommendations: Tests and Criteria) and -/C.3/R.112. Generally the Sub-Committee agreed in principle but the experts from France, the United States, the Federal Republic of Germany, the USSR and Japan noted that some tests duplicated one another and, more particularly, that care should be taken not to create confusion just when industry was discovering and using the Recommendations. The expert from the United Kingdom replied that it was necessary to anticipate so as to be able to submit an up-to-date version by 1992 or 1994.

86. The Sub-Committee went on to consider document -/C.3/R.112: "Rationalization of the Recommendations: Tests and Criteria. Presentation of the Class 1 acceptance and assignment schemes." Since there were problems of interpreting and using the table setting out the acceptance procedure, the Chairman invited the expert from the United Kingdom to prepare a document establishing a programme of work in that regard, covering the next two years. In order to facilitate that task, participants were requested to submit their comments in writing to the expert from the United Kingdom, who would thus be able to produce a new document for the next session of the Sub-Committee (July 1991).

87. The working group on the USSR documents later submitted to the Sub-Committee the report of its work consisting of a series of questions to the expert from the USSR. The secretariat was requested to publish the report (document ST/SG/AC.10/R.266). The expert from the USSR undertook to submit a reply within one month of receipt of the Russian translation of the questions. He then withdrew document -/C.3/R.38.

REVIEW OF DIVISION 6.2 (infectious substances)

Documentation: ST/SG/AC.10/C.3/4, annexes 1 and 2; ST/SG/AC.10/C.3/R.87; -/C.3/R.88; -/C.3/R.104; -/C.3/R.120; -/C.3/R.123; -/C.3/R.136

88. Document -/C.3/R.87: Transport of genetically modified organisms. The participants expressed agreement with the principle contained in the proposal submitted by the Commission of the European Communities, but not with the amendment to be made to the definition of infectious substances. The Sub-Committee therefore decided to accept provisionally the two texts submitted by the representatives of Italy and the Federal Republic of Germany and to consider them further at a future session. Both experts proposed to add at the end of paragraph 1.23 of the Recommendations (ST/SG/AC.10/1/Rev.6) and at the end of paragraph 6.9 (a) as it was amended during the second session (ST/SG/AC.10/C.3/4, annex 2):

Oral proposal by the expert from Italy

["Note: Genetically modified micro-organisms which are believed to be dangerous to humans, animals or the environment should be classified as infectious substances".]

Oral proposal by the expert from the Federal Republic of Germany

["..., or genetically modified micro-organisms which might adversely disturb the ecological balance of the environment."]

89. Document -/C.3/R.88: Provisions for infectious substances. ICAO withdrew the document.

90. Document -/C.3/R.104: Packaging requirements for Division 6.2. The proposal was amended and adopted as it appears in annex 3 to this report.

91. Document -/C.3/R.120: Comments on text for infectious substances. The document contained three proposals. Only the first was adopted as it appears in annex 3 to this report.

92. Document -/C.3/R.123: Amendment to the Recommendations, Division 6.2. The proposal was adopted (see annex 3 to this report).

93. Document -/C.3/R.136: Amendments to paragraphs 6.10.1 and 6.10.2. The proposal was adopted without any change in the figures, as shown in annex 3 to this report.

MATTERS CONCERNING PACKAGING (INCLUDING IBCs)

Documentation: ST/SG/AC.10/C.3/R.60/Rev.1; -/C.3/R.91; -/C.3/R.110; -/C.3/R.119; -/C.3/R.137; -/C.3/R.139

94. The expert from the Netherlands submitted an informal paper on testing and use which was considered with document -/C.3/R.137. Several participants of the Sub-Committee agreed with the ideas expressed in those proposals and made comments on the substance and form. The expert from the Netherlands withdrew his document and said that he would submit a new version to the Committee.

95. Document -/C.3/R.91: Combination packagings. The expert from Sweden proposed that inner packagings should be classified by category. Since several participants did not agree, the proposal was rejected.

96. Document -/C.3/R.119: Testing of combination packagings. Following a lengthy discussion on each paragraph, the document was partially adopted as it appears in annex 3 to this report.

97. Document -/C.3/R.139: Chapter 16 - Rigid plastics IBCs for liquids (31H1, 31H2). After discussion the Sub-Committee invited the observer from Austria to resubmit his proposal.

98. A small working group then met after which the expert from the United States proposed the deletion of subparagraph 9.7.1.6 (a) (vi) as contained in document -/C.3/4, annex 1, since a larger number of smaller packagings would still ensure an adequate level of safety. The proposal was adopted by a large majority.

ROUTINE LISTING AND CLASSIFICATION OF DANGEROUS GOODS

Documentation: ST/SG/AC.10/R.220; ST/SG/AC.10/C.3/R.29, -/C.3/R.34; -/C.3/R.50 and Add.1; -/C.3/R.55/Rev.1; -/C.3/R.89; -/C.3/R.92; -/C.3/R.93; -/C.3/R.94; -/C.3/R.95; -/C.3/R.99; -/C.3/R.103; -/C.3/R.105; -/C.3/R.113; -/C.3/R.114; -/C.3/R.117; -/C.3/R.118; -/C.3/R.124; -/C.3/R.127; -/C.3/R.128; -/C.3/R.130; -/C.3/R.133; -/C.3/R.140; -/C.3/R.141; -/C.3/R.145; -/C.3/R.146; -/C.3/R.151.

99. The Sub-Committee considered document -/C.3/R.29. The expert from France asked for the document to be carried forward to the Committee. The secretariat asked the expert from France whether the term "phosphore jaune" (yellow phosphorus) was correct, since it had been suggested by the translator that the appropriate term in French was "phosphore ambré" (document -/C.3/R.92). The expert replied that the term "phosphore jaune" had become accepted and that there was therefore no reason to change it.

100. A member of the secretariat presented document -/C.3/R.94 in detail and described the links with the UN/EDIFACT system. He distributed a questionnaire for comments and information, with the possibility of electronic input from participants. He also set out clearly the technical and staffing problems of the system for the secretariat.

101. The Sub-Committee welcomed the secretariat's proposals which it deemed essential for the efficiency of the work of the Committee of Experts and endorsed them in principle. Participants were invited to make detailed comments on the secretariat's questionnaire and to furnish the relevant data. The Sub-Committee expected that the type of EDP equipment it might have at its disposal would be suitable for implementing the programme in accordance with the undertakings given by the Special Adviser to the Executive Secretary and with the ongoing discussion among Governments on the priorities to be established in ECE.

102. The Sub-Committee took note of the fact that the question of the future use of the data was in the process of negotiation.

103. The expert from France introduced document -/C.3/R.151 which was adopted with amendments (see annex 3 to this report).

104. The expert from the United States proposed inserting a note at the beginning of chapter 2 which would allow substances figuring in the list of dangerous goods to be considered non-dangerous. Since many participants had objections, the Sub-Committee asked HMAC to submit a new proposal formally for the session of the Committee in December 1990.

105. The Vice-Chairman then presented the results of the working group on listing and classification (see para. 7 above). The Sub-Committee firmly reiterated that proposals for listing and classification must be submitted in

the appropriate format so that they could be inserted directly in the Recommendations on the transport of dangerous goods and, where appropriate, must include completed United Nations Data sheets.

106. Documents -/C.3/R.29, -/C.3/R.34, -/C.3/R.92 and -/C.3/R.94 had already been discussed in plenary. The other documents studied by the working group were considered in conjunction with the "Report of the working group on listing and classification". The proposals in the report were adopted with amendments as they appear in Annex 3 to this report. The secretariat was requested to publish the report for the Committee (document ST/SG/AC.10/R.267).

107. Finally the Sub-Committee considered document ST/SG/AC.10/C.3/CRP.6/Add.4 which recorded the amendments to the UN Recommendations adopted by the working group. Subject to some changes the amendments were endorsed as they appear in annex 3 to this report.

OTHER BUSINESS

108. The expert from France submitted for information a paper on revisions to the test method for Division 5.1; some participants asked to take part in the review.

109. Document -/C.3/R.98 (UN Division 4.3: Title and description) was introduced by the expert from the United Kingdom. The expert from the Federal Republic of Germany pointed out that adoption of the purely editorial proposal in document -/C.3/R.98 would have a great impact on the consignment procedures for the individual modes of transport and would lead to disharmonization for at least a couple of years. Others felt that this obstacle could be overcome by the modal authorities of various transport modes. The expert from the Federal Republic of Germany requested a roll-call vote. The following experts voted in favour of the proposal: Canada, China, United States, India, Japan, Norway, United Kingdom, Sweden. The following experts voted against: Federal Republic of Germany, France, Italy, Soviet Union. The Netherlands abstained.

110. The expert from the United Kingdom presented document -/C.3/R.110 concerning shrink-wrapping. After a short discussion the document was withdrawn. In the light of comments made, the expert from the United Kingdom undertook to prepare a new document to propose the introduction of this type of packaging into chapter 15.

111. In document -/C.3/R.83 the expert from the Union of Soviet Socialist Republics proposed a small amendment to the Precedence of Hazard Table (table 1.1) to deal with pesticides of Packing Group III. This change was agreed as shown in annex 3 to this report.

112. The expert from the USSR presented document -/C.3/R.84 with a rearranged paragraph 6.6 of the Recommendations. This was intended as an editorial improvement with which the Sub-Committee agreed. The new wording is shown in annex 3 to this report.

113. The expert from the Netherlands proposed new wording for paragraph 12.22.6, in document -/C.3/R.85 together with an informal paper (see annex 1 to this report). The wording was accepted after the values of

"80 per cent" and "20 per cent" had been put in square brackets, see annex 3 to this report. However, it was recognized that further discussion of the whole proposal might be deemed necessary by the Committee.

114. The expert from the United States proposed, in document -/C.3/R.100, to delete the current prohibition in chapter 12 of the use of tanks for air transport. The change, with a minor amendment, was agreed as shown in annex 3 to this report.

115. In response to a protest from the observer from ICAO that the first sentence of paragraph 13.3.2 of the Recommendations was not in conformity with the Oxford English Dictionary, an appropriate amendment was agreed (see annex 3 to this report).

PROGRAMME OF WORK

116. The Sub-Committee decided to submit to the Committee the following items for the progamme of work in the biennium 1991-1992: 1/

(a) Definition, classification criteria and requirements for substances with dangerous properties such as chronic, toxic effects (particularly carginogenicity), exotoxicity, etc.;

(b) Definition and criteria for exempting from the provisions in the Recommendations goods containing dangerous substances, according to their physical, chemical and biological characteristics and concentration, etc.;

(c) Review of the definition of Division 4.3;

(d) Poisonous gases;

(e) Mixtures of gases and mixtures in other classes;

(f) Review of criteria for corrosive substances;

(g) Chapter 9:

(i) interpretation of the provisions by competent authorities;

(ii) clarifying the provisions for reconditioning packagings;

(h) Packing certificates for freight containers;

(i) Chapter 10 - Simplification of the presentation of the packing methods;

(j) Biotechnology;

(k) Training of transport workers handling dangerous goods;

(l) Hazard communication;

(m) Generic entry systems;

(i) for Class 2;

(ii) for other classes;

(n) Provisions for storage of goods of Class 1;

(o) Interface between goods of Class 1 and goods of other classes;

(p) Routine listing and classification of dangerous goods;

(q) Test procedures for impacts (blunt impact, penetration) vibration and leakproofness in chapters 9 and 16;

(r) Test methods and criteria for liquids which pass the flash-point test but are not capable of supporting combustion;

(s) Manual of Tests and Criteria:

(i) Purely editorial revision to produce a more coherent and consistent text;

(ii) Updating the data;

(iii) Introduction of new tests such as those proposed by the Union of Soviet Socialist Republics;

(iv) Distinction between classifications 1.3 and 1.4 and between 1.4C and 1.4S;

(v) Introduction of preliminary screening tests;

(vi) Validation of Test Series 7.

117. The following documents were carried forward to the sixteenth session of the Committee in December 1990: ST/SG/AC.10/R.221; ST/SG/AC.10/C.2/R.604; -/C.2/R.671; -/R.672; ST/SG/AC.10/C.3/R.9/Rev.1; -/C.3/R.13; -/C.3/R.29; -/C.3/R.32; -/C.3/R.35; -/C.3/R.36; -/C.3/R.37; -/C.3/R.60/Rev.1; -/C.3/R.63; -/C.3/R.72/Rev.2; -/C.3/R.85; -/C.3/R.94; -/C.3/R.101 and Corr.1; -/C.3/R.108; -/C.3/R.109; -/C.3/R.111; -/C.3/R.112; -/C.3/R.118; -/C.3/R.126; -/C.3/R.131; -/C.3/R.132; -/C.3/R.138; -/C.3/R.143; -/C.3/R.148. An informal paper presented by the secretariat "Report on ILO Convention: Safe use of chemicals at work"; another presented by the observer from HMAC "Training dangerous goods transport workers" and one presented by the expert from the United States "Humidity of packagings" were to be published as formal documents for the Committee.

TRIBUTE TO MR. J. COX AND MR. R. WATSON

118. The Sub-Committee wished to recognize the degree of assistance provided by Mr. J. Cox (ICAO) to the Sub-Committee and to the secretariat. This assistance was instrumental in allowing the Economic Commission for Europe to provide the Sub-Committee with the support necessary to perform its function. The Sub-Committee requested that this assistance be formally recognized by a communication from the ECE to the Secretary-General of ICAO.

119. The Chairman observed that this session was Mr. Watson's last appearance as Secretary of the Sub-Committee. He had been a regular participant in sessions of ECOSOC subsidiary bodies since 1968. He had chaired the former Group of Experts on Explosives for eight years prior to its amalgamation with the Group of Rapporteurs to form the Sub-Committee in 1988. It was mainly because of his professional competence and dedication that in spite of the lack of assistance recorded in ECOSOC resolutions it had been possible in two years to achieve the objective of publishing the latest editions of the UN Recommendations, the Manual of Tests and Criteria and the ADR. The Sub-Committee expressed its appreciation for Mr. Watson's accomplishments as its Secretary and wished him well for the future.

120. The Sub-Committee regretted that a successor to Mr. Watson had not yet been appointed. Since the post of Head of the Technology Section was still vacant after several months, there would be no supervisor to maintain continuity. The Sub-Committee noted furthermore that no lasting solution had been found yet to the problem of allocating sufficient staff to service the ECOSOC work on dangerous goods which many Governments recognized as a priority area.

ADOPTION OF THE REPORT

121. The Sub-Committee adopted the report on its third session together with its annexes.

Note

1/ The order of presentation did not imply the order of priority.

Annex 1

LIST OF INFORMATION PAPERS

AGENDA ITEM	INF REF	SUBJECT
3	INF J (1)	Concerning document ST/SG/AC.10/C.3/R.125/Corr.1, page 9, annex 2
3	INF J (2)	Concerning document ST/SG/AC.10/C.3/R.125/Corr.1, page 17, annex 4
3	INF HMAC (2)	Self reactive substances - criteria
3	INF CEFIC (2)	Concerning Division 4.1 and document -/C.3/R.80
3	INF UK (1)	Colour version of addendum to document -/C.3/R.108
3	INF OCTI (2)	Division 4.1: Suggested amendments and additions
4	INF USSR (3)	Rationalization of the recommendations: tests and criteria
	INF USSR (4)	Classification of self-reactive substances
5	INF SEC (1)	Report on ILO Convention, Safe use of chemicals at work
6	INF CPI (1)	Class 2: amendment to document -/C.3/CRP.4/Add.6
6	INF ISO (1)	Progress report ISO/TC 58 Gas Cylinders
6	INF USSR (2)	Gases (Class 2: definitions, criteria and labelling)
7	INF OCTI (1)	Comments on the United States document -/C.3/R.149
7	INF OCTI (2)	N.O.S. entries
9	INF USSR (3)	Rationalization of recommendations: Tests and Criteria Addendum to documents -/C.3/R.35 and -/C.3/R.38
9	INF UK (2)	Classification of basebleeds (-/R.79)
12	INF ICAO (1)	UN numbers for goods which are only dangerous by air
12	INF CEFIC (1)	Concerning English translation of annexes to documents -/C.3/R.145 and -/C.3/R.146

AGENDA ITEM	INF REF	SUBJECT
12	INF UK (3)	Classifcation of organic peroxide resin kits (-/R.113)
12	INF UK (4)	Classification of 2-bromo-2-nitropropane-1,3-diol (-/R.114)
13	INF F (1)	Test method combustible solids, division 5.1
13	INF USSR (1)	Names of dangerous goods concerning document -/C.3/R.86
13	INF HMAC (1)	Training dangerous goods transport workers
13	INF USA (1)	Humidity of packagings
	INF NL (1)	Amendment to proposal -/R.85
	INF NL (2)	Inner packagings

Annex 2

INFORMATION CONCERNING THE DISCUSSION ON THE USE OF PROPER SHIPPING NAMES AND N.O.S. ENTRIES

(a) Canada and the United States of America

1. The experts from Canada and the United States regretted the apparent absence of a willingness on the part of RID/ADR countries to discuss objectively the entries being proposed in document ST/SG/AC.10/C.3/R.116. In their view these entries were being forced through the Sub-Committee in an effort to complete the RID/ADR text on Divisions 4.1, 4.2, 4.3 and 5.1. It was the view of the experts from Canada and the United States that the entries being proposed in general provided no useful information from the standpoint of safe transport of dangerous goods.

2. While it was suggested in the introduction of -/C.3/R.116 that these entries were needed because of the varying emergency response procedures that would apply to these goods, the experts from Canada and the United States could not identify any such justification in available emergency response guidebooks; in their view no acceptable justification had been provided by the countries that supported document -/C.3/R.116. The experts from Canada and the United States had the impression that the need for the entries proposed in -/C.3/R.116 stemmed from the unique manner in which the ADR and RID regulations were structured rather than a deficiency in the existing N.O.S. entries in the United Nations system.

3. The experts from Canada and the United States noted that IMO and ICAO in incorporating the UN N.O.S. entry system into international modal regulations had not found it necessary to introduce new entries such as those proposed in -/C.3/R.116. The experts regretted that the regional ADR and RID dangerous goods transport regulations could have such a serious impact on the UN Recommendations on the transport of dangerous goods without any apparent benefit.

(b) OCTI

1. The observer from OCTI regretted that after long discussions in the sessions of the Sub-Committee and of the Joint Meeting (RID/ADR) and despite many documents presented to those sessions, it had not been possible to convince the experts from Canada and the United States of America of the safety merits of the Joint Meeting's proposals for the N.O.S. entries.

2. The observer from OCTI hoped that those difficulties would not hamper the further harmonization of RID/ADR work on the basis of the UN Recommendations.

(c) United States of America

In connection with the absence of a French version of document -/C.3/R.116 and the general difficulties in the publication of documents described by the secretariat, the expert from the United States of America expressed amazement that the Economic Commission for Europe should maintain bureaucratic procedures which completely defeated the purpose of the FAX system. One of his documents had been submitted by FAX to ECE well before the deadline but the message had taken five days to reach the Secretary of the Dangerous Goods Unit, by which time the paper copy had arrived by the postal system but the deadline had passed. He urged the ECE to adopt modern business procedures.

UNITED
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Secretariat

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ST/SG/AC.10/C.3/6/Add.1
30 August 1990

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COMMITTEE OF EXPERTS ON THE TRANSPORT
OF DANGEROUS GOODS

Sub-Committee of Experts on the Transport
of Dangerous Goods

REPORT OF THE SUB-COMMITTEE OF EXPERTS ON ITS THIRD SESSION

(2-13 July 1990)

Addendum 1

CONTENTS

Annex 3 - ADOPTED AMENDMENTS TO THE RECOMMENDATIONS
(ST/SG/AC.10/1/Rev.6)

Annex 4 - ADOPTED AMENDMENTS TO THE MANUAL OF TESTS AND CRITERIA
(ST/SG/AC.10/11/Rev.1)

GE.90-23163/2416B

Annex 3

ADOPTED AMENDMENTS TO THE RECOMMENDATIONS (ST/SG/AC.10/1/Rev.6)

1. CONTENTS

Amend the entry for Division 4.3 to read:

"Division 4.3 - Water-reactive substances".

2. CHAPTER I:

(a) After paragraph 1.9 insert a new paragraph provisionally numbered 1.9 bis as follows:

"Wastes should be transported under the requirements of the appropriate class considering their hazards and the criteria of these Recommendations. Wastes not otherwise subject to these Recommendations but covered under the Basel Convention may be transported under class 9."

(b) Amend paragraph 1.10 to read as follows:

"Unless there is an explicit or implicit indication to the contrary in the Recommendations, dangerous goods with a melting point of 20°C or lower at a pressure of 101.3 kPa should be considered to be liquids. A viscous material should be subjected to the ASTM D 4359-84 test; or to the test for determining fluidity (penetrometer test) prescribed in Appendix A.3 of the United Nations publication ECE/TRANS/80 (Vol.1) (ADR) with the modifications that the penetrometer should conform to ISO standard 2137-1985 and that the test should be used for viscous material of any class."

(c) Paragraph 1.17.1, after the heading of "Division 2.1 Flammable gases", amend the introductory phrase to read: "Gases which at 20°C and a standard pressure of 101.3 kPa:".

(d) Paragraph 1.17.1, at the end of clause (b) of the definition of Division 2.1, add a new sentence to read "[Flammability is determined either by tests or by calculation methods adopted by the International Standards Organization.]"

(e) Paragraph 1.17.1, after the heading "Division 2.2 Non-flammable, non-toxic gases" amend the introduction to read "Gases which are transported at a pressure not less than 280 kPa at 20°C, or as refrigerated liquids, and which:" and delete the final sentence.

(f) Paragraph 1.17.1, insert in clauses (a) and (b) after the word "toxic" the words "or corrosive"; in clause (b) delete the words "on laboratory animals"; and amend the "Note" to read:

"Note: Gases meeting the above criteria owing to their corrosivity are to be classified as toxic with a subsidiary corrosive risk."

[This Note should be aligned with clause (b) to make it evident that it applies only to Division 2.3.]

(g) Paragraph 1.17.2 (c), delete the square brackets around the word "human" in the English and Russian texts; the French translators should decide whether or not to retain "chez l'homme".

(h) Amend the heading of paragraph 1.21 to read:

"Class 4 Flammable solids; substances liable to spontaneous combustion; water-reactive substances"

(i) Amend the text of paragraph 1.21 to read:

"Division 4.3: Water-reactive substances"

(j) In paragraph 1.21 after the definition of Division 4.3 insert a note to read:

"Note: Where the term 'water reactive substance' is used in these Recommendations it means a substance which, in contact with water, emits flammable gases."

(k) Paragraph 1.23, delete the last sentence in the definition of Division 6.1, then in paragraph 1.23 as amended, in the note change "as Division 6.1" to read "under UN No. 3172."

(l) Amend table 1.1 by adding to row 3 the symbol "XXX" and adding a new footnote:

"XXX 6.1 for pesticides".

3. CHAPTER 2

(a) Insert the following new entries:

(a1)	(a2)	(b1)	(b2)	(b3)	(c1)	(c2)
0491	Charges propelling	1.4C				E158
0492	Signals, railway track, explosive	1.3G				E151
0493	Signals, railway track, explosive	1.4G				E151
3164	ARTICLES, PRESSURIZED PNEUMATIC or HYDRAULIC (containing non-flammable gas)	2				
3165	AIRCRAFT HYDRAULIC POWER UNIT FUEL TANK (containing a mixture of anhydrous hydrazine and methylhydrazine) (M86 fuel)	3	6.1 8		I	
3166	ENGINES, INTERNAL COMBUSTION, including when fitted in machinery or vehicles	9		106		

(a1)	(a2)	(b1)	(b2)	(b3)	(c1)	(c2)
3167	GAS SAMPLES, NON-PRESSURIZED, FLAMMABLE, N.O.S., not deeply refrigerated	2	3	209		
3168	GAS SAMPLES, NON-PRESSURIZED, FLAMMABLE, TOXIC, N.O.S. not deeply refrigerated	2	3 6.1	209		
3169	GAS SAMPLES, NON-PRESSURIZED TOXIC - N.O.S. not deeply refrigerated	2	6.1	209		
3170	ALUMINIUM DROSS	4.3		184		
3171	WHEELCHAIR, ELECTRIC with batteries	9		106		
3172	TOXINS, EXTRACTED FROM LIVING SOURCES, N.O.S.	6.1		109 185 210		
3173	FORMALDEHYDE SOLUTIONS, POISONOUS,	6.1		211	III	M
3174	TITANIUM DISULPHIDE	4.2			III	
3175	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.	4.1		109	III	
3176	FLAMMABLE SOLIDS, ORGANIC MOLTEN, N.O.S.	4.1		109 184		[M]
3177	FLAMMABLE SOLIDS, ORGANIC, N.O.S.	4.1		109 184		
3178	FLAMMABLE SOLIDS, INORGANIC N.O.S.	4.1		109 184		
3179	FLAMMABLE SOLIDS, INORGANIC POISONOUS, N.O.S.	4.1	6.1	109 192		
3180	FLAMMABLE SOLIDS, INORGANIC CORROSIVE, N.O.S.	4.1	8	109 192		
3181	METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.	4.1		109	III	
3182	METAL HYDRIDES, FLAMMABLE, N.O.S.	4.1		109 184		
3183	SELF-HEATING LIQUIDS, ORGANIC, N.O.S.	4.2		109 184		

(a1)	(a2)	(b1)	(b2)	(b3)	(c1)	(c2)
3184	SELF-HEATING LIQUIDS, ORGANIC, POISONOUS, N.O.S.	4.2	6.1	109 192		
3185	SELF-HEATING LIQUIDS, ORGANIC, CORROSIVE, N.O.S.	4.2	8	109 192		
3186	SELF-HEATING LIQUIDS, INORGANIC, N.O.S.	4.2		109 184		
3187	SELF-HEATING LIQUIDS, INORGANIC, POISONOUS, N.O.S.	4.2	6.1	109 192		
3188	SELF-HEATING LIQUIDS, INORGANIC, CORROSIVE, N.O.S.	4.2	8	109 192		
3189	SELF-HEATING METAL POWDERS, N.O.S.	4.2		109 184		
3190	SELF-HEATING SOLIDS, INORGANIC, N.O.S.	4.2		109 184		
3191	SELF-HEATING SOLIDS, INORGANIC, POISONOUS, N.O.S.	4.2	6.1	109 192		
3192	SELF-HEATING SOLIDS, INORGANIC, CORROSIVE, N.O.S.	4.2	8	109 192		
3193	PYROPHORIC LIQUIDS, ORGANIC, CORROSIVE, N.O.S.	4.2	8	109 110	I	
3194	PYROPHORIC LIQUIDS, INORGANIC, N.O.S.	4.2		109 110	I	
3195	PYROPHORIC LIQUIDS, INORGANIC, POISONOUS, N.O.S.	4.2	6.1	109 110	I	
3196	PYROPHORIC LIQUIDS, INORGANIC, CORROSIVE, N.O.S.	4.2	8	109 110	I	
3197	PYROPHORIC LIQUIDS, ORGANIC, POISONOUS, N.O.S.	4.2	6.1	109 110	I	
3198	PYROPHORIC SOLIDS, ORGANIC, POISONOUS, N.O.S.	4.2	6.1	109 110	I	
3199	PYROPHORIC SOLIDS, ORGANIC, CORROSIVE, N.O.S.	4.2	8	109 110	I	
3200	PYROPHORIC SOLIDS, INORGANIC, N.O.S.....	4.2		109 110	I	
3201	PYROPHORIC SOLIDS, INORGANIC, POISONOUS, N.O.S.	4.2	6.1	109 110	I	

(a1)	(a2)	(b1)	(b2)	(b3)	(c1)	(c2)
3202	PYROPHORIC SOLIDS, INORGANIC, CORROSIVE, N.O.S.	4.2	8	109 110	I	
3203	PYROPHORIC ORGANOMETALLIC COMPOUNDS, N.O.S.	4.2		109 110	I	
3204	METAL CATALYST, DRY, SELF-HEATING	4.2		184 200		
3205	ALKALINE EARTH METAL ALCOHOLATES, N.O.S.	4.2		109 184		
3206	ALKALI METAL ALCOHOLATES, N.O.S.	4.2	8	109 192		
3207	ORGANOMETALLIC COMPOUNDS, or SOLUTIONS, or DISPERSIONS, WATER-REACTIVE, FLAMMABLE, N.O.S.	4.3	3	109 185		
3208	METALLIC SUBSTANCES, WATER-REACTIVE, N.O.S.	4.3		109 185		
3209	METALLIC SUBSTANCES, WATER-REACTIVE, SELF-HEATING, N.O.S.	4.3	4.2	109 129		
3210	CHLORATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1		109	II	[M]
3211	PERCHLORATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1		109	II	[M]
3212	HYPOCHLORITES, INORGANIC, N.O.S.	5.1		109	II	
3213	BROMATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1		109	II	[M]
3214	PERMANGANATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1		109 206	II	[M]
3215	PERSULPHATES, INORGANIC, N.O.S.	5.1		109	III	
3216	PERSULPHATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1		109	III	[M]
3217	PERCARBONATES, INORGANIC, N.O.S.	5.1		109	III	
3218	NITRATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1		109 184		[M]
3219	NITRITES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1		103 109 184		[M]

(a1)	(a2)	(b1)	(b2)	(b3)	(c1)	(c2)
3220	PENTAFLUOROETHANE	2				M
3224	2-BROMO-2-NITROPROPANE-1,3-DIOL	6.1		26	III	
3225	SELF-REACTIVE LIQUID TYPE B, TEMPERATURE CONTROLLED	4.1		181 194 214	II	OP1A-OP5A
3226	SELF-REACTIVE SOLID TYPE B, TEMPERATURE CONTROLLED	4.1		181 194 214	II	OP1B-OP5B
3227	SELF-REACTIVE LIQUID TYPE C, TEMPERATURE CONTROLLED	4.1		194 214	II	OP1A-OP6A
3228	SELF-REACTIVE SOLID TYPE C, TEMPERATURE CONTROLLED	4.1		194 214	II	OP1B-OP6B
3229	SELF-REACTIVE LIQUID TYPE D, TEMPERATURE CONTROLLED	4.1		194	II	OP1A-OP7A
3230	SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED	4.1		194	II	OP1B-OP7B
3231	SELF-REACTIVE LIQUID TYPE E, TEMPERATURE CONTROLLED	4.1		194	II	OP1A-OP8A
3232	SELF-REACTIVE SOLID TYPE E, TEMPERATURE CONTROLLED	4.1		194	II	OP1B-OP8B
3233	SELF-REACTIVE LIQUID TYPE F, TEMPERATURE CONTROLLED	4.1		194 213	II	OP1A-OP8A
3234	SELF-REACTIVE SOLID TYPE F, TEMPERATURE CONTROLLED	4.1		194 213	II	OP1B-OP8B
3235	AZODICARBONAMIDE	4.1		215	II	F1, F2 F4

(b) Amend the names and descriptions of UN No. 0012, 0339 and 0417 to read: "CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS".

Amend the names and descriptions of UN No. 0014, 0327 and 0338 to read: "CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK".

Delete from the name of UN No. 0328 the phrase "(CARTRIDGES, SMALL ARMS)".

Delete the entries for UN Nos. 0273, 0274, 0416 and 1325.

Amend the entries for UN Nos. 0271, 0272 and 0415 to read "CHARGES, PROPELLING".

Amend the name of UN No. 1021 to read:

"CHLORO-1-TETRAFLUORO-1,2,2,2-ETHANE" and in column (c2) insert "M".

UN No. 1198 amend column (a2) to read: "FORMALDEHYDE SOLUTIONS, FLAMMABLE".

Amend the entry for UN No. 1378 to read "METAL CATALYST, WETTED, with a visible excess of liquid."

Amend the entry for UN No. 1420 to show "I" in column (C1).

Amend the entry for UN No. 1428 to show "I" in column (C1).

Amend the entry for UN No. 1482 to read "PERMANGANATES, INORGANIC, N.O.S.", and insert "206" in column (b3).

Delete UN No. 1592.

Amend the entry for UN No. 1748 to read "CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURES, DRY with more than 39% available chlorine (8.8% available oxygen)".

Amend the entry for UN No. 1978 to read "PROPANE or PROPANE MIXTURES".

For UN No. 1992 amend 130 in column (b3) to read "129".

Amend the entry for UN No. 2207 by adding "M" in column (C2).

For UN No. 2209 amend column (a2) to read: "FORMALDEHYDE SOLUTIONS, with less than 25%, but not less than 5%, formaldehyde"; in column (b3) add: "211".

Amend the entry for UN No. 2257 to show "I" in column (C1).

Amend the entry for UN No. 2427 to read "POTASSIUM CHLORATE, AQUEOUS SOLUTION".

Amend the entry for UN No. 2428 to read "SODIUM CHLORATE, AQUEOUS SOLUTION".

Amend the entry for UN No. 2429 to read "CALCIUM CHLORATE, AQUEOUS SOLUTION".

Amend the entry for UN No. 1454 by adding "208" in column (b3).

Delete the entry UN No. 1584.

Amend the entry for UN No. 2211 to read "POLYMERIC BEADS, EXPANDABLE, evolving flammable vapour", and add "207" in column (b3).

Delete the entry UN No. 2449.

Amend the entry for UN No. 2478 by adding "M" in column (C2).

Amend the entry for UN No. 2495 by inserting "[8]" in column (b2).

Amend the entry for UN No. 2626 to read "CHLORIC ACID, AQUEOUS SOLUTION with not more than 10% chloric acid".

Amend the entry for UN No. 2741 by inserting "[6.1]" in column (b2).

Amend the entry for UN No. 2881 by deleting I from column (c1) and adding 185 to column (b3).

(c) Amend the following to read:

(a1)	(a2)	(b1)	(b2)	(b3)	(c1)	(c2)
1353	FIBRES or FABRICS IMPREGNATED WITH WEAKLY NITRATED NITROCELLULOSE, N.O.S..	4.1		109	III	
1373	FIBRES or FABRICS, ANIMAL or VEGETABLE or SYNTHETIC N.O.S., with oil.....	4.2		109	III	
1409	METAL HYDRIDES, WATER-REACTIVE, N.O.S.....	4.3		109 212		
1462	CHLORITES, INORGANIC, N.O.S.....	5.1		109	II	M
2003	METAL ALKYLS, N.O.S. or METAL ARYLS, N.O.S.....	4.2		109	I	M
2006	PLASTICS, NITROCELLULOSE-BASED, SELF-HEATING, N.O.S.....	4.2		76 109	III	
2845	PYROPHORIC LIQUIDS, ORGANIC, N.O.S.....	4.2		109 110	I	
2846	PYROPHORIC SOLIDS, ORGANIC, N.O.S.....	4.2		109 110	I	
2881	METAL CATALYST, DRY.....	4.2		200 185		
2925	FLAMMABLE SOLIDS, ORGANIC, CORROSIVE, N.O.S.....	4.1	8	109 192		
2926	FLAMMABLE SOLIDS, ORGANIC, POISONOUS, N.O.S.....	4.1	6.1	109 192		
3049	METAL ALKYL HALIDES, N.O.S. or METAL ARYL HALIDES, N.O.S.....	4.2		109	I	M
3050	METAL ALKYL HYDRIDES, N.O.S. or METAL ARYL HYDRIDES, N.O.S.....	4.2		109	I	M

(a1)	(a2)	(b1)	(b2)	(b3)	(c1)	(c2)
3088	SELF-HEATING SOLIDS, ORGANIC, N.O.S....	4.2		109 184		
3126	SELF-HEATING SOLIDS, ORGANIC, CORROSIVE N.O.S.....	4.2	8	109 192		
3128	SELF-HEATING SOLIDS, ORGANIC, POISONOUS N.O.S.....	4.2	6.1	109 192		
3139	OXIDIZING SUBSTANCES, LIQUID, N.O.S....	5.1		109 184		

(d) Amend the entries:

UN Nos. 2813, 3094, 3096, 3121, 3123, 3125, 3129, 3130, 3131, 3132, 3133, 3134, 3135 and 3148,

to read as follows:

(a) UN No. 2813 WATER-REACTIVE SUBSTANCES, SOLID, N.O.S.
(b) UN No. 3094 CORROSIVE LIQUIDS, WATER-REACTIVE, N.O.S.
(c) UN No. 3096 CORROSIVE SOLIDS, WATER-REACTIVE, N.O.S.
(d) UN No. 3121 OXIDIZING SUBSTANCES, SOLID, WATER-REACTIVE, N.O.S.
(e) UN No. 3123 POISONOUS LIQUIDS, WATER-REACTIVE, N.O.S.
(f) UN No. 3215 POISONOUS SOLIDS, WATER-REACTIVE, N.O.S.
(g) UN No. 3129 WATER-REACTIVE SUBSTANCES, LIQUID, CORROSIVE, N.O.S.
(h) UN No. 3130 WATER-REACTIVE SUBSTANCES, LIQUID, POISONOUS, N.O.S.
(i) UN No. 3131 WATER-REACTIVE SUBSTANCES, SOLID, CORROSIVE, N.O.S.
(j) UN No. 3133 WATER-REACTIVE SUBSTANCES, SOLID, OXIDIZING, N.O.S.
(k) UN No. 3134 WATER-REACTIVE SUBSTANCES, SOLID, POISONOUS, N.O.S.
(l) UN No. 3135 WATER-REACTIVE SUBSTANCES, SOLID, SELF-HEATING, N.O.S.
(m) UN No. 3148 WATER-REACTIVE SUBSTANCES, LIQUID, N.O.S.

4. CHAPTER 3:

(a) Insert the following new special provisions:

"206 This entry is not intended to include ammonium permanganate, the transport of which should be prohibited except with special authorization granted by the competent authorities.

207 These beads may be made from polystyrene, poly (methyl methacrylate) or other polymeric material.

208 The commercial grade of calcium nitrate fertilizer, when consisting mainly of a double salt (calcium nitrate and ammonium nitrate) containing not more than 10% ammonium nitrate and at least 12% water of crystallization, is considered non-dangerous.

209 The gas should be at a pressure corresponding to ambient atmospheric pressure at the time the containment system is closed and this should not exceed 105 kPa absolute. The gas should be contained in

hermetically sealed glass or metal inner packagings and with a maximum net quantity per package of 5 litres or, in the case of a toxic gas, a maximum net quantity per package of 1 litre.

210 Toxins (bacterial, phytogenic or animal toxins) which contain any infectious substances or organisms or which are contained in them should be considered for transport as Division 6.2.

211 Formaldehyde solutions with a flash-point more than 60.5°C and with:

(a) not less than 25% formaldehyde should be classified as UN No. 3173;

(b) less than 25%, but not less than 5%, formaldehyde should be classified as UN No. 2209;

(c) less than 5% formaldehyde are considered non-dangerous.

212 Packing group I or II according to grouping criteria.

213 Self-reactive substance may be transported in intermediate bulk containers (IBCs) provided the requirements of 14.2.2.11 and chapter 16 are satisfied.

214 For certain self-reactive substances of types B or C, a smaller packaging than that allowed by packing methods OP5A (or OP5B) or OP6A (or OP6B) respectively has to be used (see 14.2.2.9.4 and table 14.2)

215 The requirements of special provision 181 should be applied to preparations of azodicarbonamide showing a violent effect in laboratory tests involving heating under confinement."

(b) Amend special provision 168 to read:

"Asbestos which is immersed or fixed in a natural or artificial binder (such as cement, plastics, asphalt, resins or mineral ore) in a way that no escape of hazardous quantities of respirable asbestos fibres can occur during transport is considered non-dangerous for transport. Manufactured articles, containing asbestos and not meeting this requirement, are nevertheless considered non-dangerous for transport, when packed so that no escape of hazardous quantities of respirable asbestos fibres can occur during transport."

5. CHAPTER 4

(a) In paragraph 4.4.1 replace the third sentence by three new sentences to read:

"Assessment of the compatibility group is usually made without test data except for compatibility Groups N and S for which testing is necessary. In the case of Compatibility Group S the tests may be waived by the competent authority if classification by analogy is possible using test results for a comparable article."

(b) In paragraph 4.8 (glossary) delete from the descriptions of the terms "Cartridges for weapons" and "CARTRIDGES, SMALL ARMS" the word "military".

(c) In paragraph 4.8 (glossary) in the description of "Charges, propelling" print the name in capital letters, delete the words "in a cannon or" and add at the end "or for reducing the drag of projectiles". In the French text replace "réduire" by "modifier".

(d) [In paragraph 4.8 (glossary) in the description of "POWDER, SMOKELESS" add at the end the phrase "or CHARGES, PROPELLING FOR CANNON".] Last words "Charges, propelling" should be printed in capital letters.

(e) In paragraph 4.8 (glossary) in the description of "Propellants add at the end "or for reducing the drag of projectiles".

(f) In paragraph 4.8 (glossary) insert a new entry to read:

"CHARGES, PROPELLING FOR CANNON

Articles consisting of a propellant charge in any physical form, with or without a casing, for use in a cannon."

(g) In table 4.3 delete the entries 0273, 0274 and 0416.

(h) In table 4.3 add the entry "0491" to the term "Charges, propelling".

(i) In table 4.3 add the entries 0492 and 0493 to the term "signals" (English version only).

(j) In table 4.3 amend "Signaux" to read "Petards de chemin de fer" (that is put all the corresponding entries under this unique term) (French version only).

6. CHAPTER 5

Paragraph 5.4, under the United Kingdom, change existing words to read:

"British Standard BS 2000 Part 170
British Standard BS 2000 Part 34".

7. CHAPTER 6

(a) Amend paragraph 6.6 to read:

"6.6 Classification of pesticides

6.6.1 All active pesticide substances and their preparations for which the LC_{50} and/or LD_{50} values are known and which are classified in Division 6.1 should be classified under appropriate Packing Groups in accordance with the criteria given in paragraph 6.4. Substances and preparations which are characterized by subsidiary risks should be classified according to the precedence of hazard table with the assignment of appropriate Packing Group.

6.6.2 If the LC_{50} and/or LD_{50} values of the active pesticide substance or preparation are not known but the active substance is named in table 6.1, such substance or preparations containing this substance in concentrations mentioned in table 6.1 and which are characterized as having no subsidiary risks should be classified in Division 6.1 and assigned to the Packing Group as shown in table 6.1. Preparations containing the active substance in concentrations below the minimum stated in the Packing Group III columns of table 6.1 are considered non-dangerous. Active substances and preparations which are named in table 6.1, and which are characterized by subsidiary risks should be classfied using the precedence of hazard table.

6.6.3 If preparations of pesticides cannot be classified according to paragraphs 6.6.1 and 6.6.2 and for which the LD_{50} value of the active substance is known, the LD_{50} value of preparation can be obtained from the following formula:

$$LD_{50} \text{ value of preparation} = \frac{LD_{50} \text{ value of active substance} \times 100}{\text{percentage of active substance by mass}}$$

6.6.4 A classification according to paragraphs 6.6.2 and 6.6.3 should not be carried out when a preparation contains additives which affect the overall toxic hazard, or when a preparation contains several active substances. In such cases the classification should be based on the LC_{50} and/or LD_{50} values of the preparation as a whole, determined according to the criteria in the table in 6.4.1. If the LC_{50} and/or LD_{50} values are not known, the preparation should be classified under Packing Group I."

(b) In document ST/SG/AC.10/C.3/4, annex 1, item 4 and in annex 2 amend the text of the Note at the end of paragraph 6.9 (a) of the Recommendations to read:

"Note: Toxins (bacterial, phytogenic or animal toxins) which do not contain any infectious substances or organisms or which are not contained in them should be considered for transport as UN No. 3172."

(c) In paragraph 6.9 insert a new subparagraph (d) to read:

"(d) For purposes of these recommendations biological products and diagnostic specimens are divided into the following groups:

(1) those known or thought likely to contain infectious substances. For example, diagnostic specimens to undergo confirmatory testing should be considered to fall within this group.

(2) those where a relatively low probability exists that infectious substances are present. For example, diagnostic specimens being transported to undergo routine screening tests or for the purpose of initial diagnosis should be considered to fall within this group.

(3) those known not to contain infectious substances."

(d) In subparagraph 6.9 (a) delete the second sentence.

(e) In paragraphs 6.10.1 and 6.10.2 amend the second sentence to read:

"Diagnostic specimens referred to in paragraph 6.9 (d) (2) should meet all the provisions for infectious substances except when the following conditions are met: ..."

(f) In document ST/SG/AC.10/C.3/4, annex 1, item 4 (f) amend the instruction as follows:

"Modify the text after the first sentence in paragraph 6.14.3 to read:" (rest of text unchanged).

(g) In paragraph 6.14.3 add a new sentence at the end to read:

"In instances where a primary receptacle is made of two materials, the material most liable to damage should determine the appropriate test."

8. CHAPTER 9

(a) Insert a new paragraph 9.1.9 to read as follows:

"Packagings used for solids which may become liquid at temperatures likely to be encountered during transport should also be capable of containing the substance in the liquid state."

(b) In paragraph 9.7.1.6 (a) delete clause (vi).

(c) In paragraph 9.7.1.7 amend clause (c) to read:

"(c) The thickness of cushioning material between inner packagings and between inner packagings and the outside of the packaging should not be reduced below the corresponding thicknesses in the originally tested packaging; and when a single inner packaging was used in the original test, the thicknesses of cushioning between inner packagings should not be less than the thickness of cushioning between the outside of the packaging and the inner packaging in the original test. When either fewer or smaller inner packagings are used (as compared to the inner packagings used in the drop test), sufficient additional cushioning material should be used to take up void spaces."

9. CHAPTER 10

(a) In table 10.1, packing methods E102, E106, E112 and E119, in column 3 under the heading "Boxes" insert in the appropriate line the terms "plastics, solid (4H2)". In packing method E137, insert in column 3 after the heading "Boxes" a new first line "fibreboard (4G)". In column 4 add Ppr 56;

(b) In table 10.2, at the beginning of particular packing requirement 54, delete the word "inner", and insert a new particular packing requirement to read: "56 fibreboard boxes (4G) should not be used as outer packaging for UN No. 0106 or 0107".

10. CHAPTER 12:

(a) In table 12.1, add the following new entries:

"1978 Propane Mixtures -3-see 12.24.6-Allowed-Normal - see 12.40".

(b) In table 12.1 insert:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
"1021	Chloro-1-tetrafluoro-	blank	10.30	Allowed	Normal	1.20	blank
	1,2,2,2-ethane (R.124)		9.80				
			7.87				
			6.81				
3220	Pentafluoroethane (R.125)	blank	34.34	Allowed	Normal	0.95	blank
			30.73				
			27.44				
			24.42"				

(c) In table 12.2 add the following new entries:

"2207	Isocyanates, n.o.s. or Isocyanate solutions, n.o.s., boiling point not less than 300°C(9)	6.1/III	-	2.65	12.5.2	A/12.7.3	N	12.22.2
2478	Isocyanates, n.o.s. or Isocyanate solutions, n.o.s., flashpoint less than 23°C(9)	3/II	6.1	4	12.5.2	N.A.	N	12.22.3
3173	Formaldehyde solutions, poisonous	6.1/III	-,	2.65,	12.5.2,	A/12.7.3,	N,	12.22.2"

(d) In table 12.3 amend the following entries in the columns shown:

UN No. 1198	Col. (3)	3/III, col.(4) 6.1	
UN No. 1428	Col. (3)	4.3/I	
2257	Col. (3)	4.3/I	
UN No. 2427	Col. (2)		Potassium chlorate, aqueous solution
2428	Col. (2)		Sodium chlorate, aqueous solution
2429	Col. (2)		Calcium chlorate, aqueous solution

2495	Col. (4)	6.1, [8]
2426	Col. (2)	Chloric acid, aqueous solution with not more than 10% chloric acid"

(e) In paragraph 12.1.1, first sentence, delete "except air transport".

(f) In paragraph 12.2.2, second sentence, delete "of being carried by land or sea and".

(g) Amend paragraph 12.22.6 (a) to read:

"with a degree of filling for liquids having a viscosity of less than 2,680 centistokes at 20°C, of more than [20] per cent but less than [80] per cent, unless the shells of tank-containers are divided by partitions or surge plates, into sections of not more than 7,500 litres capacity;"

(h) In paragraph 12.400, amend heading to read:

"Flammable solids; Substances liable to spontaneous combustion and water-reactive substances"

11. CHAPTER 13:

(a) In paragraph 13.3.2 change "a good" to "an item of dangerous goods".

(b) Replace table 13.2 with the following:

"Table 13.2: LABELS FOR CLASS 2 GASES WITH SUBSIDIARY RISK(S)

Division	Subsidiary risk(s) shown in Chapter 2	Primary risk label (with Class number 2 in lower corner)	Subsidiary risk label(s)
2.1	None	2.1	None
2.2	None	2.2	None
	5.1	2.2	5.1
2.3	None	2.3	None
	2.1	2.3	2.1
	5.1	2.3	5.1
	5.1, 8	2.3	5.1, 8
	8	2.3	8
	2.1, 8	2.3	2.1, 8

"

(c) In paragraph 13.5.4, amend text under blue label to read:

"Water-reactive substances".

(d) In paragraph 13.6.1, clause (b) delete the third sentence.

(e) In table 13.3 add:

"UN No. 3172 TOXINS, EXTRACTED FROM LIVING SOURCES, N.O.S."

(f) In table 13.3, amend the following entries to read:

"2813 WATER-REACTIVE SUBSTANCES, SOLID, N.O.S.

3094 CORROSIVE LIQUIDS, WATER-REACTIVE, N.O.S.

3096 CORROSIVE SOLIDS, WATER-REACTIVE, N.O.S.

3121 OXIDIZING SUBSTANCES, SOLID, WATER-REACTIVE, N.O.S.

3123 POISONOUS LIQUIDS, WATER-REACTIVE, N.O.S.

3125 POISONOUS SOLIDS, WATER-REACTIVE, N.O.S.

3129 WATER-REACTIVE SUBSTANCES, LIQUID, CORROSIVE, N.O.S.

3130 WATER-REACTIVE SUBSTANCES, LIQUID, POISONOUS, N.O.S.

3131 WATER-REACTIVE SUBSTANCES, SOLID, CORROSIVE, N.O.S.

3132 WATER-REACTIVE SUBSTANCES, SOLID, FLAMMABLE, N.O.S.

3133 WATER-REACTIVE SUBSTANCES, SOLID, OXIDIZING, N.O.S.

3134 WATER-REACTIVE SUBSTANCES, SOLID, POISONOUS, N.O.S.

3135 WATER-REACTIVE SUBSTANCES, SOLID, SELF-HEATING, N.O.S.

3148 WATER-REACTIVE SUBSTANCES, LIQUID, N.O.S."

12. CHAPTER 14:

(a) In paragraph 14.1.1.3, amend to read:

"Division 4.3 comprises water-reactive substances."

(b) In paragraph 14.4, amend heading to read:

"Division 4.3 - Water-reactive substances"

13. CHAPTER 15:

(a) In table 15.1 add two new entries to read:

Class	Packing Group	State	Maximum quantity per inner packaging
"5.2 c/	II	Solid	500 g
5.2 c/	II	Liquid	125 ml"

b) Amend footnote b/ to read:

"The organic peroxide should be of type B or C and should not require temperature control. See 11.3.3, 11.3.5 and footnote to 15.2 (e)."

(c) Insert a new footnote c/ to read:

"The organic peroxide should be of type D, E or F and should not require temperature control. See 11.3.3, 11.3.5 and footnote to 15.2 (e)."

(d) Change footnote c/ to read footnote d/ (twice).

14. CHAPTER 16:

Insert a new subparagraph 16.1.6.8 to read:

"IBCs used for solids which may become liquid at temperatures likely to be encountered during transport should also be capable of containing the substance in the liquid state."

INDEX

(a) Add the following new entries:

Substance or Article	Class	Number
"AIRCRAFT HYDRAULIC POWER UNIT FUEL TANK (containing a mixture of anhydrous hydrazine and methylhydrazine) (M86 fuel)	3	3165
ALUMINIUM DROSS	4.3	3170
ARTICLES, PRESSURIZED PNEUMATIC or HYDRAULIC (containing non-flammable gas)	2	3164
Chromic acid, see	5.1	1463
Chromic anhydride, solid, see	5.1	1463
Chromic nitrate, see	5.1	2720
Cupric chlorate, see	5.1	2721
Dichloro-s-triazine-2,4,6-trione, see	5.1	2465
ENGINES, INTERNAL COMBUSTION, including when fitted in machinery or vehicles	9	3166
FORMALDEHYDE SOLUTIONS, POISONOUS	6.1	3173
GAS SAMPLES, NON-PRESSURIZED, FLAMMABLE, N.O.S., not deeply refrigerated	2	3167
GAS SAMPLES, NON-PRESSURIZED, FLAMMABLE, TOXIC, N.O.S., not deeply refrigerated	2	3168
GAS SAMPLES, NON-PRESSURIZED, TOXIC, N.O.S., not deeply refrigerated	2	3169
Manganous nitrate, see	5.1	2724
Nickelous nitrate, see	5.1	2725
Nickelous nitrite, see	5.1	2726
Picrotoxin, see	6.1	3172
POLYMERIC BEADS, EXPANDABLE, evolving flammable vapour	9	2211
Potassium nitrate and sodium nitrate mixtures, see	5.1	1499
PROPANE MIXTURES	2	1978
Sodium nitrite and potassium nitrate mixtures, see	5.1	1487

Substance or Article	Class	Number
Thallous chlorate, see	5.1	2573
TITANIUM DISULPHIDE	4.2	3174
TOXINS EXTRACTED FROM LIVING SOURCES N.O.S.	6.1	3172
1,3,5-Trichloro-s-triazine-2,4,6-trione, see	5.1	2468
WHEELCHAIR, ELECTRIC with batteries	9	3171
Amend existing entries to read as follows:		
CALCIUM CHLORATE, AQUEOUS SOLUTION	5.1	2429
CALCIUM HYPOCHLORITE MIXTURES, DRY, with more than 39% available chlorine (8.8% available oxygen)	5.1	1748
CHLORIC ACID, AQUEOUS SOLUTION, with not more than 10% chloric acid	5.1	2626
Cocculus, see	6.1	3172
FORMALDEHYDE SOLUTIONS with less than 25%, but not less than 5%, formaldehyde	9	2209
FORMALDEHYDE SOLUTIONS FLAMMABLE	3	1198
Formalin, see	3 9 6.1	1198 2209 3173
Polystyrene beads, expandable, see	9	2211
POTASSIUM CHLORATE, AQUEOUS SOLUTION	5.1	2427
SODIUM CHLORATE, AQUEOUS SOLUTION	5.1	2428
METAL CATALYST, WETTED, with a visible excess of liquid	4.2	1378"

(b) Delete the following entries:

"p-DICHLOROBENZENE	6.1	1592
OXALATES, water soluble	6.1	2449
Indian berry, see	6.1	1584"

(c) Delete the entries for UN Nos. 0271, 0272, 0273, 0274, 0415 and 0416.

(d) Insert a new entry to read:

"CHARGES, PROPELLING	1.1C	0271
	1.3C	0272
	1.2C	0415
	1.4C	3236"

(e) Add to the entry

"SIGNALS, RAILWAY TRACK, EXPLOSIVE"
the following new entries:

"1.3G	0492
1.4G	0493"

(English version only).

(f) Add to the entry

"PETARDS DE CHEMINS DE FER"
the following new entries:

"1.3G	0492
1.4G	0493"

(French version only).

(g) Delete the entry "CHLOROTETRAFLUOROETHANE ..... 2 1021"

and insert the following new entries:

BROMONITROPROPANE-DIOL	6.1	3224
PENTAFLUOROETHANE	2	3220
CHLOROTETRAFLUOROETHANE	2	1021

(h) Delete the relevant entries for UN Nos. 2813, 3094, 3096, 3121, 3123, 3125, 3129, 3130, 3131, 3132, 3133, 3134, 3135 and 3148 and add the following new proper shipping names:

"CORROSIVE LIQUIDS, WATER REACTIVE, N.O.S.	8	3094
CORROSIVE SOLIDS, WATER REACTIVE, N.O.S.	8	3096
POISONOUS LIQUIDS, WATER-REACTIVE, N.O.S.	6.1	3123
POISONOUS SOLIDS, WATER-REACTIVE, N.O.S.	6.1	3125
WATER-REACTIVE SUBSTANCES, LIQUID, CORROSIVE, N.O.S. ...	4.3	3129
WATER-REACTIVE SUBSTANCES, LIQUID, N.O.S.	4.3	3148
WATER-REACTIVE SUBSTANCES, LIQUID, POISONOUS, N.O.S. ...	4.3	3130
WATER-REACTIVE SUBSTANCES, SOLID, CORROSIVE, N.O.S.	4.3	3131
WATER-REACTIVE SUBSTANCES, SOLID, FLAMMABLE, N.O.S.	4.3	3132
WATER-REACTIVE SUBSTANCES, SOLID, N.O.S.	4.3	2813

WATER-REACTIVE SUBSTANCES, SOLID, OXIDIZING, N.O.S.	4.3	3133
WATER-REACTIVE SUBSTANCES, SOLID, POISONOUS, N.O.S.	4.3	3134
WATER-REACTIVE SUBSTANCES, SOLID, SELF-HEATING, N.O.S. .	4.3	3135"

(i) Delete the following entries:

Substance or Article	Class	Number
"AZODIISOBUTYRONITRILE	4.1	2952
2,2'-AZODI-(2,4-DIMETHYL-4-METHOXYVALERONITRILE)	4.1	2955
2,2'-AZODI-(2,4-DIMETHYLVALERONITRILE)	4.1	2953
2,2'-AZODI-(2-METHYLBUTYRONITRILE)	4.1	3030
4-[BENZYL(ETHYL)AMINO]-3-ETHOXYBENZENEDIAZONIUM ZINC CHLORIDE	4.1	3037
4-[BENZYL(METHYL)AMINO]-3-ETHOXYBENZENEDIAZONIUM ZINC CHLORIDE	4.1	3038
2,5-DIETHOXY-4-MORPHOLINOBENZENEDIAZONIUM ZINC CHLORIDE	4.1	3036
4-DIMETHYLAMINO-6-(2-DIMETHYLAMINOETHOXY)TOLUENE-2-DIAZONIUM ZINC CHLORIDE	4.1	3039
3-(2-HYDROXYTHOXY)-4-PYRROLIDIN-1-YL BENZENEDIAZONIUM ZINC CHLORIDE.....	4.1	3035"

and insert the following new entries:

"AZODICARBONAMIDE	4.1	3235
SELF-REACTIVE LIQUID TYPE B, TEMPERATURE CONTROLLED	4.1	3225
SELF-REACTIVE LIQUID TYPE C, TEMPERATURE CONTROLLED	4.1	3227
SELF-REACTIVE LIQUID TYPE D, TEMPERATURE CONTROLLED	4.1	3229
SELF-REACTIVE LIQUID TYPE E, TEMPERATURE CONTROLLED	4.1	3231
SELF-REACTIVE LIQUID TYPE F, TEMPERATURE CONTROLLED	4.1	3233
SELF-REACTIVE SOLID TYPE B, TEMPERATURE CONTROLLED	4.1	3226
SELF-REACTIVE SOLID TYPE C, TEMPERATURE CONTROLLED	4.1	3228
SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED	4.1	3230
SELF-REACTIVE SOLID TYPE E, TEMPERATURE CONTROLLED	4.1	3232
SELF-REACTIVE SOLID TYPE F, TEMPERATURE CONTROLLED	4.1	3234"

(j) Insert the following new entries:

Substance or Article	Class	Number
ALKALI METAL ALCOHOLATES, N.O.S.	4.2	3206
ALKALINE EARTH METAL ALCOHOLATES, N.O.S.	4.2	3205
BROMATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1	3213
CHLORATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1	3210
FLAMMABLE SOLIDS, INORGANIC, CORROSIVE, N.O.S.	4.1	3180
FLAMMABLE SOLIDS, INORGANIC, N.O.S.	4.1	3178
FLAMMABLE SOLIDS, INORGANIC, POISONOUS, N.O.S.	4.1	3179
FLAMMABLE SOLIDS, ORGANIC MOLTEN, N.O.S.	4.1	3176
FLAMMABLE SOLIDS, ORGANIC, N.O.S.	4.1	3177
HYPOCHLORITES, INORGANIC, N.O.S.	5.1	3212
METAL CATALYST, DRY, SELF-HEATING	4.2	3204
METAL HYDRIDES, FLAMMABLE, N.O.S.	4.1	3182
METALLIC SUBSTANCES, WATER-REACTIVE, N.O.S.	4.3	3208
METALLIC SUBSTANCES, WATER-REACTIVE, SELF-HEATING, N.O.S.	4.3	3209
METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.	4.1	3181
NITRATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1 5.1	3218 3219
ORGANOMETALLIC COMPOUNDS, or SOLUTIONS, or DISPERSIONS, WATER-REACTIVE, FLAMMABLE, N.O.S.	4.3	3207
PERCARBONATES, INORGANIC, N.O.S.	5.1	3217
PERCHLORATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1	3211
PERMANGANATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1	3214
PERSULPHATES, INORGANIC, AQUEOUS SOLUTIONS, N.O.S.	5.1	3216
PERSULPHATES, INORGANIC, N.O.S.	5.1	3215
PYROPHORIC LIQUIDS, INORGANIC, CORROSIVE, N.O.S.	4.2	3196
PYROPHORIC LIQUIDS, INORGANIC, N.O.S.	4.2	3194

Substance or Article	Class	Number
PYROPHORIC LIQUIDS, INORGANIC, POISONOUS, N.O.S.	4.2	3195
PYROPHORIC LIQUIDS, ORGANIC, CORROSIVE, N.O.S.	4.2	3193
PYROPHORIC LIQUIDS, ORGANIC, POISONOUS, N.O.S.	4.2	3197
PYROPHORIC ORGANOMETALLIC COMPOUNDS, N.O.S.	4.2	3203
PYROPHORIC SOLIDS, INORGANIC, CORROSIVE, N.O.S.	4.2	3202
PYROPHORIC SOLIDS, INORGANIC, N.O.S.	4.2	3200
PYROPHORIC SOLIDS, INORGANIC, POISONOUS, N.O.S.	4.2	3201
PYROPHORIC SOLIDS, ORGANIC, CORROSIVE, N.O.S.	4.2	3199
PYROPHORIC SOLIDS, ORGANIC, POISONOUS, N.O.S.	4.2	3198
SELF-HEATING LIQUIDS, INORGANIC, CORROSIVE, N.O.S.	4.2	3188
SELF-HEATING LIQUIDS, INORGANIC, N.O.S.	4.2	3186
SELF-HEATING LIQUIDS, INORGANIC, POISONOUS, N.O.S.	4.2	3187
SELF-HEATING LIQUIDS, ORGANIC, CORROSIVE, N.O.S.	4.2	3185
SELF-HEATING LIQUIDS, ORGANIC, N.O.S.	4.2	3183
SELF-HEATING LIQUIDS, ORGANIC, POISONOUS, N.O.S.	4.2	3184
SELF-HEATING METAL POWDERS, N.O.S.	4.2	3189
SELF-HEATING SOLIDS, INORGANIC, CORROSIVE, N.O.S.	4.2	3192
SELF-HEATING SOLIDS, INORGANIC, N.O.S.	4.2	3190
SELF-HEATING SOLIDS, INORGANIC, POISONOUS, N.O.S.	4.2	3191
SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.	4.1	3175

Annex 4

ADOPTED AMENDMENTS TO THE MANUAL OF TESTS AND CRITERIA
(ST/SG/AC.10/11/Rev.1)

1. Amend section 46.5 to read:

"EXAMPLES OF RESULTS

Test Substance	Results	Data Reference
Composition B	+	United States sources
PBx 9502	-	United States sources
Octorane 86A	-	French sources
B 3103	-	French sources
B 3003	+	French sources

Composition B: Cast material consisting of 60% RDX and 40% TNT
PBx 9502: Pressed material consisting of 95% TATB and 5% Kel-F.
Octorane 86A: Cast Plastic-Bonded explosive consisting of 86% HMX and 14% of an inert binder.
B 3103: Cast Plastic-Bonded explosive, consisting of 51% HMX, 19% Aluminium and 30% energetic binder
B 3003: Cast Plastic-Bonded explosive, consisting of 80% HMX and 20% energetic binder."

(Amend in the French version "inerte" to read "énergétique")

2. Amend the end of the table in section 47.5 to read:

"

Test Substance	Results	Data Reference
TNT cast	+	FS/FE/287/03/87/005
Composition B	+	United States sources
PBx-9502	-	United States sources
B 3103	+	French sources
B 3003	+	French sources

"

and delete columns 2 and 3.

3. Amend the table in section 48.5 to read:

"

Test Substance	Results	Data Reference
Composition B	+	United States sources
PBx 9502	-	United States sources
Octorane 86A	-	French sources
B 3103	+	French sources
B 3003	+	French sources

"

and delete column 2 (French version only).

4. Insert at the end of the table in section 49.5 the following:

"

Test Substance	Results	Data Reference
Composition B	+	French sources
PBx-9502	-	French sources
Octorane 86A	-	French sources
B 3103	-	French sources
B 3003	+	French sources

"

5. Amend the table in section 50.5 to read:

"

Test Substance	Results	Data Reference
Composition B	+	United States sources
PBx-9502	-	United States sources
Octorane 86A	-	French sources
B 3103	-	French sources
B 3003	+	French sources

"

6. Amend the table in section 51.5 to read:

"

Test Substance	Results	Data Reference
Composition B	+	United States sources
PBx-9502	-	United States sources
Octorane 86A	-	French sources
B 3103	-	French sources
B 3003	+	French sources

"

7. Amend the table in section 52.5 to read:

"

Test Substance	Results	Data Reference
Composition B	+	United States sources
PBx-9502	-	United States sources
Octorane 86A	-	French sources
B 3003	+	French sources

"